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INDIVIDUAL, GROUP and CULTURAL PROCESSES in CHANGING SOCIETIES

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Group Climate and Decision-Making Performance

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Abstract

The aim of the research is to examine the effect of group psychological climate on the decision-making performance of university learning teams. The group psychological climate consists of four dimensions, namely supervisor consideration, autonomy, time pressure, and cohesiveness. The group decision-making performance is measured in terms of effectiveness, efficiency, learning and growth, and group satisfaction. An experiment has been conducted by manipulating the dimensions of supervisor consideration, autonomy, and time pressure (2 x 2 x 2 factorial), the dimension of cohesion is controlled in experiment. It is found that the group decision-making performance is affected by the group psychological climate. It also reveals that supervisor consideration constitutes a significant factor in the group decision-making performance. The groups with a large measure of supervisor consideration but without neither autonomy nor time pressure demonstrate the best group decision-making performance. The research implies that supervisor consideration in terms of leadership predicts group psychological climate strength.

Introduction

Psychological climate have a significant impact on decision-making processes. Psychological climate is the person's interpretation of his or her social context. The psychological climate of groups is defined as the group members' common perception of their task-related environment (Jones & James, 1979; Joyce & Slacum, 1984). The task environment is manifest in physical buildings, task-related working premises, task types, interaction between group members and group leaders. The research is focused on the social environment rather the physical one, such as the buildings' grandeur, interior designs, spaciousness, temperature, or lighting. When individuals within the group agree on their perceptions of the task environment, the common perceptions can be assembled to describe the group's psychological climate (Glisson & James, 2002).

The small groups studied in the current research each has three main characteristics, namely group interdependence and interactivity, frequency of viable interactions between group members, and the opportunities for synergy for the groups' enterprises and performance. The effectiveness of small groups is manifest in the dynamic processes of the groups' decision making. The group psychological climate is conducive when the group members develop common perceptions that their task

environment is dynamic, quiet, comfortable, peaceful, warm, and when there is mutual trust as well as active interaction between group members, especially in decision making.

On the contrary, an unfavorable group psychological climate may become a source of serious problems and produces negative effects on the group performance. Results of a preliminary research conducted by means of interviews with the leaders of an institute which provides psychological services reveal that there are five indicators of unfavorable psychological climate: (1) lack of group coordination, (2) inability to build mutual trust and mutual appreciation between group members, (3) disagreement over procedures of task implementations, which result in friction in the group and withdrawal from the group, (4) weak commitment toward the demands of professionalism, and (5) indifference among group members or indifference on the part of the supervisor in confronting common problems and to the contributions of group members.

In several previous researches this unfavorable group psychological condition are studied within the context of industrial/organizational psychology. One study by Jackofsky and Slocum (1988) on organizational psychological situations and the development of intentions toward turnover, namely workers' intentions to transfer to another job or to relinquish their job. Intentions toward turnover also occur in the nursing profession, accompanied with absenteeism, which constitutes an indicator of withdrawal. These problems naturally result from stress in the profession and are related to antecedent factors, namely the organizational psychological climate (Cherniss, 1980; Hemingway & Smith, 1999; Stobbe, Plummer, Jensen & Attfield, 1988). Studies on the organizational climate were also conducted to understand the impact of psychological situation on the subjective powerlessness among providers of health services in big cities in the United States, in reform legislation (Strutton, Chowdhury, & Pelton, 1997).

Group psychological climate which is cooperative, cohesive, dynamic, and conducive will presumably affect group performance. In the present research, more attention is given to the group performance than individual performance because group living is the primary characteristic of collective cultures. When expectations and consideration are no longer based on individual performance, then group achievement would become an alternative worth serious study and consideration.

Group Decision-Making Performance

Group performance is the achievement demonstrated by a particular group in undertaking a particular task. Group performance is the primary determinant for the success of a group (Stott & Walker, 1995). Recent researches on group performance and decision making have discovered that processes may determine success or failure. Both successes and failures can be explained within the contexts of situations and procedures. Contexts may affect motivation as well as the coordination of various available resources. Discussions of new approaches such as the signal detection theory at group level and traditional approaches such as groupthink are still underway in the inquiry into the phenomena of group decision-making performance. Researches on groups during the 1990s are focused on information processing within and by the group, namely how the group tries to arrive at an agreement about alternatives for acceptable decisions (Kerr & Tindale, 2004).

Four aspects crucial to group performance which have been identified in the literature studies and researches conducted by Hackman and Oldham (1980), Katzenbach and Smith (1993), MacBride and Mendibil (2003) are as follows:

First, group effectiveness, namely the level of stakeholders' satisfaction with the undertaking or result of a particular task by a particular group. The group is able to produce results which are likely to satisfy the stakeholders' expectations.

Second, efficiency, namely the level at which processes within the group (such as communication, coordination, leadership, collaboration, and decision making) and the provision of support to efforts meant to obtain certain results, the development of individual skills among group members) have enabled the group to perform satisfactorily without wasting time or resources.

Third, learning and growth, characterized by results of learning processes (*knowledge artifacts*), such as innovations, proliferated skills, documented learning results, best practices, tools, methods, and process progress.

Fourth, group members' satisfaction, namely the level at which the contribution of group efforts positively affect the personal growth of the individual members.

Group performance is better than individual performance when confronted with complex tasks as those in business and the academic world. Group performance is often related to the combined competencies of its members and variables which affect group effectiveness (Watson, Michaelsen & Sharp, 1991; Watson, et als., 2002). Groups are also known in the academic world, utilized in classes as a part of the learning processes (Michaelsen, Watson, Cragin & Fink, 1982). Learning teams are natural groups, each consisting of several students (resources) who should work together for a certain period of time (transformation) to achieve something or some success as individuals and as a group (product), and the processes within the group constitute significant points to develop group synergy.

Learning teams usually carry out a particular task or project together by conducting explorations, doing analysis, proposing solutions, making decisions over a particular complex case study within their academic interest. Learning teams commonly carry out tasks in a competition with other similar teams, and their achievements would be evaluated by the teaching staff. Studies on learning teams are, therefore, important for at least two reasons. First, learning teams are expected to consistently demonstrate a particular performance in carrying out their tasks —but this point has been rarely discussed in the available literature on groups. Secondly, learning teams are often employed in the designs of learning processes in order to achieve instructional targets in the academic world (Watson et al., 2002).

A study by De Dreu (2007) has indicated that a cooperation which is characterized by interdependence is likely to produce more information exchanges, more extensive and more effective learning, especially when the flexibility of the tasks is also high. This study has supported the perspective of motivated information processing (De Dreu, 2005; De Dreu & Carnevale, 2003). There is evidence that groups within laboratory settings make better decisions and negotiate more constructively at times of conflict when: (a) the members see that there is cooperation and interdependence among them in order to obtain the expected results and that members are in possession of social motivation, (b) group members are motivated to be involved in an information processing which is systematic, rigorous, and considerate.

On the basis of the above theories and research studies, group performance indicators which are likely to produce social achievements can be observed from the viewpoint of the types of task assigned to the group. The working environment in the academic world differs from that in business companies, health facilities, sports, and law firms. The working environment in business companies is closely related to the value and quantity of delivered products as well as financial performance. In the academic world, teams learn to make decisions concerning a particular complex case within their academic interest. In psychological education, in particular, the tasks assigned to the groups are related to learning processes with the purpose to make decisions on the basis of recommendations produced by the related psychological assessment. Such processes put a greater demand for cognitive skills than motoric skills. The performance of the learning teams in carrying out tasks which require decision making can be measured with group effectiveness (the appropriateness of the decisions made), group efficiency (internal processes within the group), learning and group growth, as well as satisfaction among group members.

Group Psychological Climate

The development of concepts of group psychological climate started with the study of Lewin, Lippitz, and White (1939), who coined the terms “social climate” and “group behavior.” This study examined several groups of teenagers who were under the supervision of adults who adopted three different styles of leadership, namely democratic, autocratic, and permissive. The concept of psychological climate is rooted in social psychology and developed toward applications in industrial and organizational psychologies. The concept of psychological situation developed from psychological climate, collective psychological climate, organizational climate, as well as organizational culture when referring to people’s perception of their working environment (Parker, et als., 2003). It is generally agreed that psychological situation belongs to the individual; the relevant theoretical approaches, measurements, and analysis in this regard have also been agreed upon (James & Jones, 1974; Reichers; Rousseau, 1988; Schneider, 1990). Group psychological climate, collective psychological climate, organizational climate, and organizational culture are often measured by collecting individual perceptions of their working environment. This measurement can be done more appropriately by employing the theoretical approaches and analysis commonly applied to groups, organizations, and other forms of social collectivities.

Group psychological climate is the common perception held by members of a particular group of the policies, procedures, and operational practices within the group or the organization (Schneider, 1990; Rentsch, 1990). A multilevel interpretation of this definition implies that policies determine strategic objectives and the importance of objective attainment, whereas procedures provide technical guides to actions which aim to attain specific objectives. Operational practices relate to the implementation of policies and procedures at the lesser group levels (sub-units). It is based on the assumption that policies and procedures belong to the top level of the organization and are executed at the lower levels (sub-units). Within the construct of organizational climate (Schneider, 1988), group psychological climate is then defined as individual perceptions which share a common description of the environment, specifically the working environment of that particular group. Literature studies postulate that group psychological climate brings a

significant contribution to operational effectiveness (Boerner, 2005; Kopelman et als., 1990; Koys & De Cotiss, 1991).

Organizational psychological climate describes the organization's atmosphere in terms of interpersonal functions within the working environment. The dynamic compositions of individuals within a particular environment create specific situations when the individuals interact (Isaksen & Lauer, 1999; Schneider, 1987). Although the concepts of psychological climate are commonly framed at the individual level, it is also presumed that these processes work in an interactive and reciprocal way. Similar individuals are attracted to similar things, socialize in similar ways, produce similar descriptions of their social environment, and share common interpretations of the same environment. Such processes produce a consensus about a particular psychological situation. When this consensus can be shown as a perception at a higher level, such perceptions can be assembled to provide a construct of a group psychological climate or an organizational psychological climate (James, 1982). A number of researches support this perspective (Gavin, 1975; Jones & James, 1979; Kozlowski & Farr, 1988; Kozloski & Hults, 1987), although many of them are focused on picturing technologies and structures as the key factors of the organizational context (Koslowsky & Doherty, 1989).

Group psychological climate serves as an intervening variable, which is derived from a variety of resources (such as the composition of group members, building layouts, knowledge, skills, products, group vision and mission, and financing), productivity, welfare, satisfaction, and quality of workmanship (Isaksen & Lauer, 1999). The role of psychological climate as an intervening variable is also based on the conclusions of Ekvall (1996), who maintains that group psychological climate has the power to affect organizational processes such as problem solving, decision making, communication, coordination, control, and other processes such as learning, creative works, motivation, and commitment. The perspective of study by Ekvall (1991) serves as a firm foundation for the assumption that psychological climate constitutes an intervening variable which affects behaviors within the organization.

Items and scales within the variable of psychological climate are built by means of interviews, observations, and literature studies in order to obtain empirical indicators of a particular evaluation or emotional cognition (James & James, 1989; James & Sell, 1981; Jones & James, 1979). Four factors of psychological situation derived from factor analysis with orthogonal rotation according to James and James (1989) of a variety of working environments are as follows: (1) Pressure and the lack of harmony; (2) Challenge of the tasks and autonomy; (3) Leaders' support and facilitation; (4) Coordination, comradeship, and warmth in group interaction (James & James, 1989; James & Sell, 1981). The working environments under study were groups of navy personnel, groups of system analysts, production units, and groups of firemen.

On the basis of the research results of James and James (1989), Koys and De Cotiis (1991) and the results of factor analyses conducted by Odden and Sias (1997), it can be concluded that the dimensions of group psychological situation are as follows: (1) supervisor consideration; (2) cohesion; (3) autonomy; and (4) pressures. The four dimensions of group psychological situation are described further as follows:

1. Supervisor Consideration

The dimension of supervisor consideration consists of supervisor's trust, support, respect and fairness toward group members. A similar degree of consideration is also manifest among group members. According to Koys and De Cotiis (1991), the dimension of supervisor consideration often characterizes the relationship between superiors and subordinates, between leaders and followers. Kramer (1995) in his study has found that workers who have a close relationship with their supervisors are likely to have more openness and mutual trust toward their peers.

2. Cohesion

On the basis of classical descriptions, group cohesion is defined as the sense of belonging to or togetherness with a group to which individual members may aspire (Brown, 2000). In a number of researches, the terms cohesion refers to attraction toward a group, group spirit, bond with interpersonal attractions, emotional ties, sense of belonging, sense of togetherness, and an "us-ness." Cohesion is emphasized more on attraction toward group ideas or group prototypes than on attraction toward certain individuals (Brown, 2000; Dyaram & Kamalanabhan, 2005). Three aspects of cohesion—namely interpersonal attraction, commitment toward tasks and pride of group association—independently affect group performance (Beal, Cohen, Burke, & McLendon, 2003).

3. Autonomy

Autonomy bestows a measure of freedom to group members to carry out tasks in accordance with their responsibilities (Stephenson & House, 1971; Strutton & Pelton, 1994). Group members who work with autonomy differ from those who are control-oriented. Group members working with autonomy are likely to create an environment which is characterized by mutual trust and one in which group members can feel they are not alienated from the supervisor or manager (Deci & Ryan, 1987). This kind of environment is likely to bring a sense of security to the group, preserve group stability, and improve group confidence (Kotler, 1989).

4. Pressures

Pressures have to do with perceptions of the time allocated to carry out tasks and of the expected output results (Odden & SIas, 1997). Pressures can be defined as the level of excess barrier imposed from without. Pressures can also be perceived as something that is inappropriate for the workings of a profession, as something unbecoming or incongruous. When pressures are imposed, they limit an individual's opportunities to express him or herself (Strutton, Chowdurry, & Pelton, 1997).

The four dimensions of psychological climate may serve as catalysts for changes within the group, especially to improve group learning performance. Group psychological climate may also strengthen or otherwise hamper the attainment of certain output results, and can be manipulated to facilitate the attainment of other group objectives.

Our Research

The present research emphasizes the perspective social identities as the starting point for the group study. The perspective of social identities provides integrative information about group comparisons and the understanding of inter-group relationship in society. The perspective of social identities emphasizes self-representation as an

integrated part of the social group and the emotional attachment to group membership. Two primary motives that encourage people to carry out a social identification are the need for self-improvement and to reduce uncertainties (Hogg, Abrams, Otten, & Hinkle, 2004). The need for self-improvement by joining and identifying with a particular social group produces two effects, namely the attainment of group achievements or performance and in-group favoritism or out-group derogation. The present research emphasizes the attainment of group performance through the identities of social groups and the contexts within which the groups operate.

The primary focus of the approach of theories of social identities postulates that the powerful impact of social groups upon the way people perceive their own groups and other groups around them cannot be comprehended without also considering the social settings within which those groups operate. The factor of social settings is crucial to the group. The factor of social settings can become a source of threats, but can also become a source of potentials for the group in confronting threats (Ellemers, 2002).

This social setting can be in the form of a particular psychological situation which the group experiences. The group context can also be in the form of inter-group relationship, such as an environment in which groups threaten one another. For example, the group context can be in the form of an environment that threatens a particular group which has been stigmatized, so that the members of the threatened group feels his or her social identity degenerates, which in turn will also lessen the performance of the group (Derks, Laar, & Ellemers, 2006). The way group response to psychological situations may affect group performance, especially in decision making. The social setting of the present research is in the form of group psychological situation which consists of supervisor consideration, group autonomy in carrying out tasks, the pressures the groups confront in carrying out those tasks, and group cohesion. The four dimensions of psychological situation may become a source of potentials to the groups, but otherwise may also become a source of threats which hamper group performance. The choice of the four dimensions of psychological climate is based on the results of a factor analysis (James & James, 1989; Koys & De Cotiis, 1991; Oden & Sias, 1997), which subsequently underlie the manipulated treatment conducted in the experiment.

Hypothesis:

> Group decision-making performance (which is at the same time reflected in effectiveness, efficiency, group learning-growth, and the satisfaction of group members) is affected by the interactions of group psychological climate (supervisor consideration, autonomy, and pressures).

Method

The research was conducted with an experiment. An experiment is a process which is undertaken to show that an event can be predicted by means of a set of situations which are purposefully created and designed. Our experiment empirically tested the impact of group psychological situation, namely supervisor consideration, autonomy, and pressures (2 x 2 x 2 factorials) on the groups' decision-making performance.

Participants and Research Design

The research used 120 student groups which involved 360 student participants from the Faculty of Psychology, Muhammadiyah University of Surakarta. The participants consisted of 76 males (21.1%) and 284 females (18.9%). All participants were students of the Faculty of Psychology who had been at least five semesters into their study. The study was divided into eight treatment blocs, in which a particular treatment was given and subsequently measured. Each treatment blocs consisted of 15 decision-making groups, which each conssited of 3 participants, making a total of 120 participant groups.

The experiment was conducted by testing the effect of two types of supervisor (considerate and inconsiderate), 2 types of autonomy (autonomous and un-autonomous), and 2 types of pressure (under pressure and under no pressure). The experiment tested the effects of these independent variables concurrently by means of a 2 x 2 x 2 factorial design. The effects of 8 different group psychological climate on group decision-making performance was measured by means of four indicators, namely 1) effectiveness, 2) efficiency, 3) learning and growth, 4) group satisfaction.

Procedures

Each participant filled in an informed consent form stating his or her willingness to participate in the research processes. Nexts, the participants were divided into eight blocks on the basis of random assignment. Each bloc was further divided into 15 groups also on the basis of random assignment, each consisting of 3 students. Each group, facilitated by a supervisor, was encouraged to get acquainted with each, to design a name and a signature yell in order to build group identity. The aim of these activities was to set up control over the dimension of cohesion by introducing all groups into a cohesive psychological situation.

At the next stage, to each bloc was assigned 3 different cases, the result of a psychological assessment for each of which they had to recommend a particular decision. In each case, the participants were required to choose a candidate for an assistant psychologist to be positioned in a bureau of consultation services under a set of predetermined criteria. This profile was similar to the case model developed by Stasser and Titus (1985) and Postmes et al. (2001). Three candidates were available. Candidate A had more positive information than Candidate B or Candidate C. Each candidate was in possession of 12 items of information. A positive information was one which was appropriate for the requisite major criteria and which was in the possession of a candidate. Neutral information was one which was irrelevant to the requisite major criteria. Negative information was one which was appropriate for the predetermined major criteria, but was not in the possession of a candidate. Candidate A had a positive : neutral : negative information ratio of 6 : 3 : 3. Candidates B and C each had a positive : neutral : negative information ratio of 3 : 6 : 3. The greater number of positive informations in the possession of candidate A served as the key to the appropriateness of the decision making.

The task was carried out in a psychological situation which was predetermined on the basis of variations in the supervisor consideration dimension (considerate x

inconsiderate), variations in the autonomy dimension (autonomous x un-autnomous), and variations in the pressure dimension (under time pressure and under no time pressure).

Upon completion of the task by all groups, an independent variable manipulation checking was conducted to find out the success level of manipulated treatment, and concluded with a measurement of group decision-making performance. When all sessions of the experiment for the 8 blocs were done, participants received a debriefing and an opportunity to express his or her opinion about the experimental processes. The researchers openly imparted everything about the manipulated treatment, making sure that all of the treatments which had been given were acceptable to all participants.

Group Climate Manipulation

Supervisor consideration

Supervisor consideration was manipulated by giving a particular role-play to a supervisor, who served as a confederate, producing considerate and inconsiderate supervisors on the basis of behavioral characteristics for each supervisor. The person to act as a supervisor was briefed and trained before role-play. The behavioral characteristics of each supervisor were predetermined on the basis of operational zed theoretical studies.

Four qualities of trust, support, respect, and fairness were assigned to characterize supervisor consideration. In this experiment, these dimensions of supervisor consideration were manipulated in two variations, producing considerate and inconsiderate supervisors.

Autonomy

Autonomy was manipulated by giving each group a set of envelopes containing instructions to carry out the tasks assigned to them. Autonomous groups were given instruction sheets which were folded and inserted into an envelope. The instruction said that the group was free to employ any method they knew to choose one among the three available candidates. Un-autonomous groups were given instruction sheets which were folded and inserted into an envelope. Here the instructions were clear and detailed, prescribing steps to be taken for the decision making, in the way of a standard operational procedure.

Time pressure

Task pressure was manipulated by giving different time schemes for the implementation of the task. The no time pressure groups were given no deadlines for the implementation of their task. The other groups were given an established deadline (10 minutes) for the completion of their task. (In this case study, the time allocated was 10 minutes; on average the task was accomplished in 15 minutes for each case.)

Measurement

Effectiveness

Effectiveness was measured with the decision appropriateness indicator (appropriate = 1; inappropriate = 0). Group decision appropriateness was then compared

with one correct answer. The correct answer was derived from supervisor evaluation on the basis of combined information ratio (positive : neutral : negative information) for each case. The correctness of the answer was based on the appropriateness of choosing the candidate for assistant psychologist with greatest positive information ratio as compared with the other candidates.

Efficiency

Efficiency was measured from the total scores of observation rating on the basis of 12 behavioral observations (a = 0.805). Each behavioral observation was marked with an option —either a "yes" (score = 1, when the behavior is evident) or a "no" (score =0, when the behavior is not evident). For example, a list of the behavioral observations contained one which said "*All group members demonstrated serious efforts to review and redefine the problem*" and "*All group members evidenced real efforts to be actively involved in the search for relevant information*." The role of observer was carried out by a confederate who had been briefed and trained before observation.

Learning and Growth

Learning and growth were measured by means of a psychological scale derived from the literature studies of Stott and Walker (1995), MacBride and Mendibil (2003), and Kaplan and Norton (1996, 2001). The psychological scale was designed by the researchers by employing a 6-point scale which ranged from 1 (strongly disagree) to 6 (strongly agree). The scale of group learning and growth (reliability coefficient a = 0.706) was built on 8 statements. (For example, one statement said "*We were able to learn from the strong points of other members in the small group as well as from the class supervisor*"; another said "*We were able to expand our knowledge and share information with our colleagues as well as class supervisor when we tried to make a decision.*"

Satisfaction

Satisfaction was measured by means of a psychological scale derived from the literature studies of Stott and Walker (1995), MacBride and Mendibil (2003), and Kaplan and Norton (1996, 2001). This psychological scale was constructed by the researchers by employing a 6-point scale which ranged from 1 (strongly disagree) to 6 (strongly agree). The scale of group member satisfaction (reliability coefficient a = 0.747) was built on 8 statements. . (For example, one statement said "*We were able to accomplish the task assigned to our small group satisfactorily*"; another said "*We were happy to have collaborated with each other in our small group and with the class supervisor*.")

Result and Discussion

Decision making is defined as understanding and selecting a particular item and existing various combination of information. Decision can be taken by individuals and groups. The research is focused on the performance of decision making by a group that is influenced by psychological state of such group.

Manipulation checks

Analysis result of manipulation checks on supervisor consideration, autonomy and pressure shows a significant difference among 8 treatment groups on the supervisor consideration manipulation condition (F 57,884; $p < 0,05$), group pressure manipulation condition (F 129,151; $p < 0,05$), and significant difference among those 8 groups in terms of group autonomy manipulation condition (F 4,927; $p < 0,05$). Overall, the result of analysis indicates that treatment manipulation is carried out successfully.

Group Psychological Climate

Based on Pillai's trace criteria, the influence of group psychological situation interaction against group decision making is 10.3% ($p < 0,05$, $\eta = 0,103$). Analysis result of multivariate 3 of group psychological climate is shown on Table 2.

Table2.
Multivariate Analysis of Group Psychological Climate

Effect	F	η^2	p
Intercept	9,033	0,997	0,000
Supervisor Consideration (S)	**15,771****	0,367	0,000
Autonomy (A)	2,059	0,070	0,091
Pressure (P)	1,639	0,057	0,170
S x A	1,935	0.066	0,110
S x P	1,224	0,043	0,305
A x P	1,854	0,064	0,124
S x A x P	**3,126***	0,103	0,018

* $p < 0,05$, ** $p < 0,01$

Pillai's trace criteria based on Olson findings (Sharma, 1996) are considered robust to detect the difference among groups. Based on this result, it is concluded that the difference among group decision making performance exists in various interactions of psychological situation, thereby the Major Hypothesis is acceptable: group decision making performance (effectiveness, efficiency, group learning-development, and group member satisfaction) is affected altogether by group psychological climate interaction (supervisor consideration, autonomy, and pressure).
Another finding indicates the significant difference decision making performance at various supervisor consideration situation ($F=15,771; p<0.01, \eta^2=0,367$).Overall, based on the above result, it is concluded that the dependent variable differences i.e. the differences of 4 group decision making performance indicators depend on: 1) interaction between supervisor consideration , autonomy, and pressure, and 2) supervisor consideration (significant at $p < 0.05$).

Group Decision Making Performance

After the process of collective group interaction in dealing with a particular task, then groups achieved work result. Such work result is commonly referred as group performance. Group decision making performance is measured by four indicators, namely effectiveness, efficiency, group learning and development and group member satisfaction. To closely examine the influence of supervisor concerns, autonomy, and pressure interaction against inter-group decision making performance, please check Table 3.

Table 3. Univariate Analysis of Group Decision Making Performance

Source	Dependent Variable	df	F	η^2	p
	Between Group				
Corrected	Effectiveness	7	1,683	0,095	0,120
Model	Efficiency	7	1,709	0,097	0,114
	Learning and Growth	7	10,510**	0,396	0,000
	Satisfaction	7	4,133**	0,205	0,000
Supervisor	Effectiveness	1	3,993*	0,034	0,048
Consideration	Efficiency	1	0,091	0,001	0,763
(S)	Learning and Growth	1	53,819**	0,325	0,000
	Satisfaction	1	11,642**	0,094	0,001
Autonomy	Effectiveness	1	1,232	0,011	0,269
(A)	Efficiency	1	1,320	0,012	0,253
	Learning and Growth	1	3,994*	0,034	0,048
	Satisfaction	1	3,281	0,028	0,073
Pressure (P)	Effectiveness	1	2,415	0,021	0,123
	Efficiency	1	0,296	0,003	0,587
	Learning and Growth	1	3,343	0,029	0,070
	Satisfaction	1	5,235*	0,045	0,024
S x A	Effectiveness	1	0,444	0,004	0,507
	Efficiency	1	0,000	0,000	1,000
	Learning and Growth	1	6,181*	0,052	0,014
	Satisfaction	1	0,880	0,008	0,350
S x P	Effectiveness	1	1,232	0,011	0,269
	Efficiency	1	0,717	0,006	0,399
	Learning and Growth	1	2,997	0,026	0,086
	Satisfaction	1	1,412	0,012	0,237
A x P	Effectiveness	1	0,049	0,000	0,825
	Efficiency	1	1,463	0,013	0,229
	Learning and Growth	1	1,865	0,016	0,175
	Satisfaction	1	6,310*	0,053	0,013
S x A x P	Effectiveness	1	2,415	0,021	0,123
	Efficiency	1	8,078**	0,067	0,005
	Learning and Growth	1	1,369	0,012	0,244
	Satisfaction	1	0,170	0,002	0,681
Error	Effectiveness	112			
	Efficiency	112			
	Learning and Growth	112			
	Satisfaction	112			

* $p < 0,05$; ** $p < 0,01$

Comparison of group decision making performance average is shown in Table 4 and Table 5.

Table 4
Comparison of Group Decision Making Performance Average*

	Autonomy		Un-Autonomy	
	Without Pressure	Pressure	Without Pressure	Pressure
Effectiveness				
Considerate Supervisor	0,80 (0,41)	0,87 (0,35)	0,93 (0,26)	0,80 (0,41)
Inconsiderate Supervisor	0,80 (0,41)	0,47 (0,52)	0,80 (0,41)	0,73 (0,46)
Efficiency				
Considerate Supervisor	8,60 (2,53)	6,93 (3,24)	8,33 (3,39)	8,47 (3,21)
Inconsiderate Supervisor	6,40 (3,39)	8,80 (2,31)	9,27 (3,45)	7,20 (2,34)
Learning and Growth				
Considerate Supervisor	41,11 (2,77)	40,64 (2,39)	42,49 (1,48)	39,71 (2,01)
Inconsiderate Supervisor	38,64 (3,05)	38,69 (2,37)	36,69 (2,86)	36,56 (2,68)
Satisfaction				
Considerate Supervisor	41,69 (2,80)	41,44 (2,50)	42,60 (1,28)	39,76 (3,04)
Inconsiderate Supervisor	40,24 (3,24)	40,69 (1,78)	39,96 (1,28)	38,53 (2,67)

*measured from interaction between supervisor concerns, autonomy, and pressure.Notes: Average Score and Standard Deviation is expressed in parenthesis. Higher average means better decision making performance indicator.

Table 3 indicates that: **First**, no significant difference in terms of effectiveness of interaction between supervisor consideration, autonomy, and pressure ($F = 2{,}415$; $p > 0{,}01$ $\eta=0{,}002$). From the analysis result, it is clear that hypothesis claiming the effectiveness of group decision making being influenced by interaction of group psychological situation gains no support in this research, thus Hypothesis **1 is not acceptable.** Effectiveness of group decision making is significantly different in supervisor concerns group ($F = 3{,}993$; $p < 0{,}05$; $\eta = 0{,}034$). Table 4.5 shows that considerate supervisor group indicates better effectiveness average compared to inconsiderate supervisor ($M= 0{,}85 > M = 0{,}70$).

Table 5.
Comparison of Group Decision Making Performance Average**

Group Decision Making Peformance	**Group Total Average**		
Effectiveness	0,78		
Efficiency	8,00		
Learning and Growth	39,32		
Satisfaction	40,61		
Group Decision Making Peformance	**Supervisor Consideration**		**p**
	Considerate	Unconsiderate	
Effectiveness	0,85	0,70	0,048
Efficiency	8,08	7,92	>0,05
Learning and Growth	40,99	37,64	0,000
Satisfaction	41,37	39,86	0,001
Group Decision Making Peformance	**Autonomy**		**p**
	Autonomy	Un- Autonomy	
Effectiveness	0,73	0,82	>0,05
Efficiency	7,68	8,32	>0,05
Learning and Growth	39,77	38,86	0,048
Satisfaction	41,02	40,21	>0,05
Group Decision Making Peformance	**Pressure**		**p**
	Without Pressure	Pressure	
Effectiveness	0,83	0,72	>0,05
Efficiency	8,15	7,85	>0,05
Learning and Growth	39,73	38,90	>0,05
Satisfaction	41,12	40,11	0,024

** Measured from each dimension of group psychological climate
Higher average means better decision making performance indicator.
TS = insignificant difference

Second, significant difference is apparent in efficiency (F = 8,078; p < 0,01, η2 = 0,067) of interaction between supervisor consideration, autonomy, and pressure. Such analysis result supports the hypothesis claiming that the efficiency of group decision making is affected by interaction of group psychological climate, thus **Hypothesis 2 is accepted**. Table 4.4 shows that group with inconsiderate supervisor, no autonomy, and without pressure indicates the best efficiency among those 8 groups (M = 9,27). Group with inconsiderate supervisor, autonomy, and without pressure indicates the lowest efficiency among 8 groups (M 6,40).

Third, there is no significant difference in terms of learning-growth (F 1.369l; p > 0,05; η= 0,012) in group interaction of supervisor consideration, autonomy, and pressure. Analysis result indicates that hypothesis claiming the learning and growth is affected by interaction of group psychological interaction gains no support in this research, thus **Hypothesis 3 is rejected**. Learning and growth is significantly different in supervisor consideration and autonomy interaction group (F= 6,181; p < 0.05, η2 = 0.012) and autonomy group (F = 3.994; p <

Learning and growth in autonomy group is better than un-autonomy group (M = 39,97 > M = 38,86). Group learning and growth is also significantly different in supervisor consideration group (F = 10,510; p < 0,01; η2= 0,396). Learning and growth in considerate supervisor group is better than inconsiderate supervisor group (M = 40,99 > M = 37,64).

Fourth, there is no significant difference in terms of group members satisfaction (F = 6,310; p > 0,05; n = 0,396) in supervisor consideration, autonomy and pressure interacion. The analysis result shows that hypothesis which explains the group members satisfaction influenced by the interaction of group's psychological climate does not get any support in this research, so the **Hypothesis 4 is rejected**. The group member satisfaction is significantly different in autonomy and time pressure interaction group (F = 4,133; p < 0,05 η = 0,002), also in pressure group (F = 5,235; p < 0,05; η2 = 0,045). The group members satisfaction in the group without time pressure is higher than the group with time pressure (M = 41,12 > M = 40,11). Group members satisfaction is also significantly different in supervisor consideration group (F = 4,133; p < 0,01; η = 0,205). The group members satisfaction in considerate supervisor group is higher than inconsiderate supervisor group (M = 41,37 > M = 39,86).

Overall, this describes that supervisor consideration, autonomy, and pressure interaction is significantly influential toward efficiency. It means that among the four performance indicators of group's decision making, only the efficiency which discusses and observes time in the group's task accomplishment. Thus, the influence of supervisor consideration, autonomy and time pressure interaction would be significantly influential and support the rise of efficiency in the group.

An interesting number pattern is found in the comparison of group average (Table 4) and four performance indicators of group's decision making, that is the group with considerte supervisor, un- autonomy and without pressure (cell 3) is superior in the three performance indicators of group decision making, namely effectiveness, learning and growth also group's satisfaction. On the contrary, the position of the group that has inconsiderate supervisor, un- autonomy, and without pressure (cell 8) is below average and the lowest among eight groups in terms of learning and growth, group members

satisfaction, effectiveness, as well as efficiency. The test difference of the two groups then will be observed in table 6.

Table 6
Test of Group Performance Difference between Group with considerate supervisor, un-autonomy, without pressure and group with un-considerate supervisor, un-autonomy, with pressure.

Source	Dependent Variable	SS	df	MS	F	η^2	p
Group Psychological Climate (Cell 3 & 8)	Effectiveness	0,300	1	0,300	2,172	0,072	0,152
	Efficiency	9,633	1	9,633	1,135	0,039	0,296
	Learning & Growth	264,093	1	264,093	56,279**	0,668	0,000
	Satisfaction	124,066	1	124,066	28,315**	0,503	0,000

The result of t-test between two groups indicates that the model is acceptable, meaning that the significance difference is discovered between two groups in terms of learning and growth process and also group members satisfaction. This supports the average comparison between two groups. Overall, it can be concluded and predicted that ***groups with considerate supervisor, Un-autonomy, and without pressure has a great opportunity to feature the best performance in decision making.*** Meanwhile, it is also concluded that the group with inconsiderate supervisor, un-autonomy and with pressure is predictable to have bad performance in decision making.

General Discussion

The main goal of this research is to test the effect of group psychological climate toward the performance of group's decision making. The data analysis result then is synthesized to acquire comprehensive result. The theoretical results and previous research indicate that group's psychological climate such as cohesion, supervisor concerns, autonomy and pressure is influential toward group performance. The psychological situation in organization has influence in productivity, job satisfaction, well-being and quality (Ekval, 1996). Psychological climate has significant power to influence group or organization processes such as problem solving, decision making, communication, coordination, control and psychology process in learning, working, motivation and commitment.

The comprehensive result indicates that: **first,** interaction of group psychological climate has significance effect toward the performance of group's decision making, efficiency in particular. Efficiency is the group's ability to work well without wasting time and resources. The performance indicator of group's decision making takes a significant consideration to time in accomplishing the group's tasks, thus, such can be influenced by the supervisor consideration, autonomy and time pressure interaction.

Second, the supervisor consideration is influential toward group's performance (James & James, 1989; Koys & De Cotiis, 1991; Odden & Sias, 1997), especially group's effectiveness. A supervisor in a broader meaning also plays role as the leader in group.

The leader, who knows the way, shows the way and leads the way. In this research, supervisor consideration is influential especially toward effectiveness indicator, learning and growth also groups members' satisfaction.

Social identity perspective which is used to explain supervisor consideration phenomena or, in broader meaning, is the concern of a leader in social group is used to understand the group process. When the group becomes cohesive, attraction is rising up between group members, thus the social attraction is created. When the group has supervisor, the members start making perception whether the supervisor has characteristic or prototype of group's expectation. Prototype is the series of some attributes such as perception, attitude, feeling and behavior which is meaningful and has suitability with group's expectation. Someone who is perceived to have group's prototype and prove his/her prototype will be judged as the effective leader. This individual is considered to be the soul of the group. This leader has great opportunity to give influence to group member's behavior including to process information for the group (Hogg, 2001) when a decision has to be made. Leadership is related with power and individual influence to decide group's agenda, to define identity and to move people. The process then can support group to be prominent and robust or, in other words, a group with good performance. In social identity perspective, a group is considered existed, in psychological perspective, when group members are willing to conduct self identification with the group. This identification process is based on the interaction, communication and interdependency between group members.

From the social identity perspective, the performance psychological dynamics of group's decision making is definable. Group's psychological situation is the group's external environment which is created from group member's perception sameness that they have social connection and interest. The group members who have interest then become cohesive when facing a task or demand. This condition is supported by the existence of leader who can build dynamic interaction in group because that leader has ideal values as a guide for group members. The group leader manages and communicates with the group to use the proper ways to work with a task, exchange suitable ideas and information to make decision. This group's psychological climate is concluded as influential toward the performance of group's decision making.

Third, the dimension of groups' psychological climate in this research besides the supervisor concerns dimension is the autonomy and time pressure dimension which is manipulated in experiment, also the cohesion dimension which is controlled in experiment. Cohesiveness is the important condition in performance of group's decision making. The three cohesion aspects, namely interpersonal interest, commitment toward the tasks and the pride toward the group, have independent relation toward group performance (Geal, et al 2003). The autonomy dimension in the research is significantly influential toward the learning and growth process, while the pressure dimension is significantly influential toward group satisfaction. Autonomy dimension is related with group's authority toward the procedure which is used in group task accomplishment. The autonomy group (given freedom to apply its own procedure) indicates higher learning and growth average than un-autonomy group. This autonomy environment results secured situation for the group, maintains the group's stability also improves the confidence of group members to be able to solve problem and make their own decision with limited interfere from supervisor (Joyce & Slocum, 1984; Kotler; 1989). The

positive point of autonomy group is that the group members become independent and responsible in accomplishing the tasks. Pressure aspect is related with perception of time which is needed for task accomplishment and performance expectation. The group without time pressure shows the higher average of group satisfaction compared to group with time pressure. Time pressure can make the group members lose the chance to consider important and limited information to show up their ability (Strutton, dkk., 1997; Stasser & Birchmier, 2003), thus, the satisfaction toward decision decreases.

Fourth, the group with considerate supervisor, un-autonomy and without pressure demonstrate the best group decision-making performance.

Final Comments

As the final and comprehensive conclusion, this research formulates an idea that achieving satisfactory social performance, from group psychological climate perspective, needs supported by the important factors, namely group's cohesiveness, considerate leadership based on fairness, trust, support and appreciation toward group members, autonomy by considering the type of task being handled and the requirements to be completed by the group in accomplishing a particular task.

Limitations and Direction for Future Research

This research has some limitations. First, since this research is focused on the group psychological situation or climate, namely group's member perception toward work environment as performance antecedent of group decision making, it is not considering the other relevant potential variables which is influential toward the performance of group's decision making. Second, based on facts, the real decision making dynamics in psychological profession group is more complex compared to the scope of this research. For example, information ratio to be collectively considered prior to decision making is far more complex compared to this research and the appearance of group supervisor which is geographically far away with decision maker group.